

# Laboratory Preparedness for Emergency animal diseases in Papua New Guinea

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## National Animal Health and Food Testing Laboratory: The Veterinary Diagnostic Laboratory

National Animal Health and Food Testing Laboratory (NAHFTL) is the only Veterinary diagnostic Laboratory in the country and is under the Office of the Chief Veterinary Officer within the National Agriculture Quarantine and Inspection Authority (NAQIA), i.e, the Veterinary Authority in PNG.

NAHFTL Provided emergency diagnostic support through serological and molecular testing of ASF samples (ELISA and PCR respectively) collected from sick pigs in the ASF Infected areas.

Since the experience with ASF, the technical capacity of the VDL has developed through the support of the LabCap Project and as shown in graph below, now is able to perform a number of diagnostic testing.

## Diagnostic Capabilities through the support of the LabCap Project

Disease	Test Method		
	Rapid Testing Kit (RTK)	Serology – ELISA	PCR
African swine fever (ASF)	Available	Available	Available
Foot and mouth disease (FMD)	Available	In progress	Available
Lumpy skin disease (LSD)	N/A	In progress	Available

Serology	PCR	Sectional Laboratory		
		Bacteriology	Bacteriology	Parasitology
IBDV (in progress)	IBDV (in discussion)	Fowl Typhoid/ Salmonella	Faecal/ diarrhoea samples	Faecal quantitative test
NDV (in progress)	NDV (in discussion)	Colibacillosis	Pus/ abscess samples	Direct faecal smearing
AIV (in progress)	AIV (PNGIMR)	Fowl Cholera		Ectoparasite (external parasite) identification

## ASF Situation Update

Below is a diagram giving a brief summary of the events since the incursion of ASF to present.

Figure 1. Compressed timeline 1

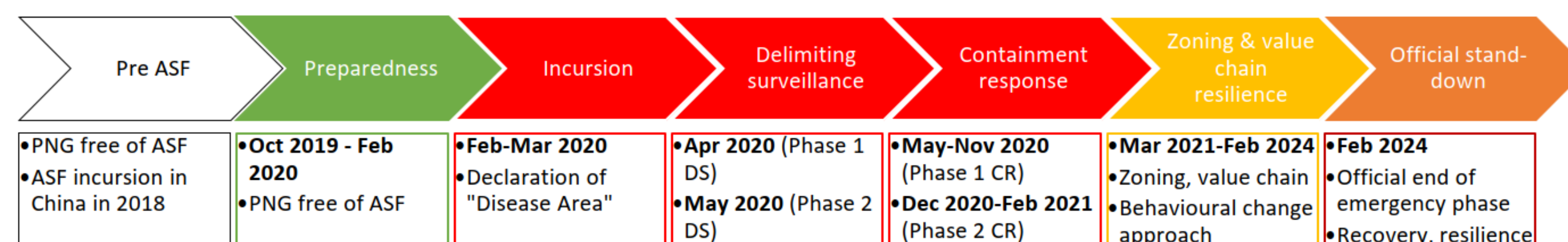
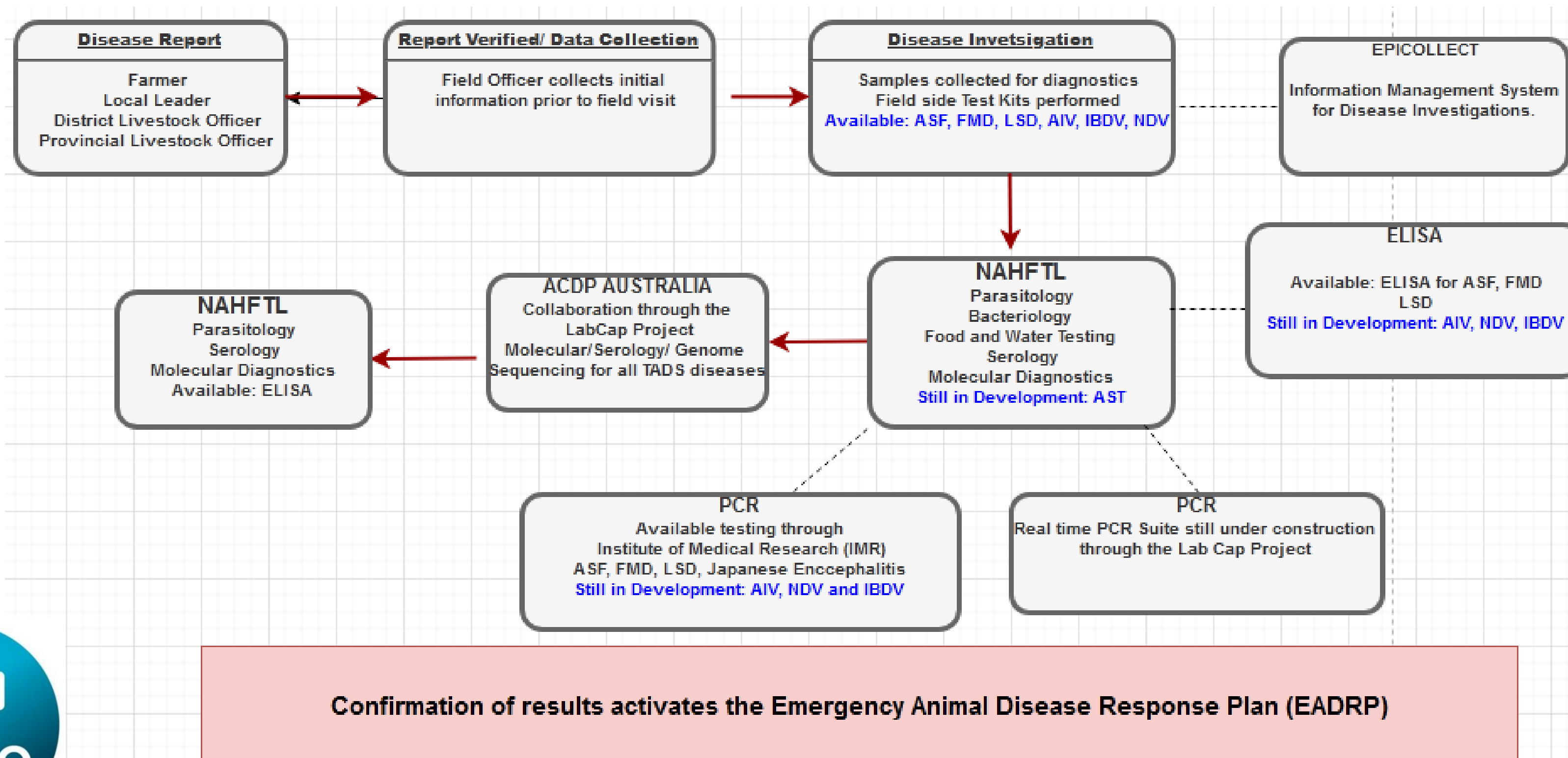


Figure 2. Elaborate timeline 2

Year	2018..	2019	2020		2021	2022	2023	2024
Events	ASF in China	Nipa, pig deaths	Mendi ASF confirmed	ASF spread to WHP		NGE 2022		
Phases		Preparedness	Emergency Response			Zoning & compartmentalisation - value chain resilience		Resilience & recovery
Policy			G202; Covid, NTF		G289		National/sub-national TADS management approach	
Measures taken	FAO EMC		Delimiting, Risk comms		Zoning containment			
Capacity building			Emergency containment response		VC/BCC approach			
						Vet/paravet	ERADICATE Plan reviews	
						NAHIS development		

Below describes the normal pathway by which ASF and other animal disease reports are investigated from field to Laboratory.



## Challenges/ Recommendations

### Challenges/ Gaps

- Maintaining an adequate number of qualified, well-trained and competent laboratory staff.
- Competing work priorities with several work programs and priorities
- Aging and deteriorating physical building infrastructure and utilities that impacts work.
- Safety issues with current state of laboratory
- Limited opportunities for career pathways and development.
- Having adequate ICT support to adequately implement day-to-day operations and projects.

### Recommendations

- A new corporate structure has been developed and is awaiting approval by Department of Personnel Management. This will allow recruitment and promotion of current staff.
- Established Project Monitoring and Management Committee meeting to manage different projects. Need to meet more regularly.
- Through support from the Australian High Commission, the NAQIA Real time PCR suite building will be reconstructed. Masterplan for the Laboratory will be developed and to be used to seek support for the reconstruction of other sections of the laboratory.
- NAQIA needs to progress with the planned WOH PVS Missions
- NAQIA to embrace the FAO ECTAD Program
- Maintain collaborations with partners that have continually supported upskilling of laboratory personnel and capacity.

